DOCUMENT RESUME

ED 237 601 UD 023 208

AUTHOR Mitra, Sudhansu B.
TITLE Job Adjustment of Disadvantaged Youth: A Study of Concurrent Validation.
SPONS AGENCY National Inst. of Education (ED), Washington, DC.
PUB DATE Aug 83
GRANT NIE-G-78-0002
NOTE 28p.; Paper presented at the Annual Convention of the American Psychological Association (Anaheim, CA, August 26-30, 1983).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Achievement Gains; Black Youth; Disadvantaged Youth; Dropouts; Employment Experience; High Schools; *High School Students; *Job Satisfaction; *Job Training; Nontraditional Education; *Out of School Youth; *Program Effectiveness; Program Evaluation; Urban Education; Vocational Adjustment
IDENTIFIERS Comprehensive Employment and Training Act; *Harbor City Learning Program

ABSTRACT

How educational experiences and programs sponsored by the Comprehensive Employment and Training Act (CETA) could better prepare inner-city youth, particularly black, disadvantaged youth, to perform successfully in a number of jobs or occupations was the subject of this study. The Harbor City Learning program, a partially CETA-funded project in Baltimore, Maryland, provided a comprehensive educational program on a year-round basis: part-time work experience and training in the public sector for those in traditional in-school programs; and an alternative curriculum mixed with paid job experiences for school dropouts. Graduates from the in-school group who were employed for six months or more were compared with subjects from the alternative program who met employment requirements. Findings suggested that the alternative program served a useful purpose, inasmuch as its vocationally oriented training curriculum helped the participants bring their aptitude measures up to the level of those who had graduated from the regular school. This achievement was particularly noteworthy, since the alternative program subjects came from inferior home environments and had inferior school backgrounds. The study further indicated that the subjects from relatively better home conditions experienced more job satisfaction than subjects from more deprived homes because of lesser needs. (CMG)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED237601

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Sudhamsu B. MITRA

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Job Adjustment of Disadvantaged Youth: A Study of Concurrent Validation

UD 023 208

JOB ADJUSTMENT OF DISADVANTAGED YOUTH: A STUDY ON CONCURRENT VALIDATION

Sudhansu B. Mitra, Ph.D.
Coppin State College, Baltimore, Maryland

Abstract

This research study attempted to examine how educational experiences and programs sponsored by the Comprehensive Employment and Training Act (CETA) could better prepare the inner-city youth to perform successfully in a number of jobs or occupations. Movement from training to job was the central concern of the study. The subjects who had graduated from regular in-school programs and were employed for six months or more were compared with their compeers who had graduated from an alternative program, especially developed for school dropouts, and who met the employment requirements. The study suggests that the alternative program served a useful purpose, inasmuch as its vocationally oriented training curriculum helped the participants acquire the aptitude measures to the level of those who had graduated from the regular school. This achievement was particularly noteworthy, as the trainees in the alternative program came from inferior home environment and had poorer school background. The study further indicates that the subjects from relatively better home conditions experience more job satisfaction because of lesser needs; whereas, the position is reversed in the case of persons from more deprived homes.

Paper presented at the 1983 Annual Convention of the American Psychological Association, Anaheim, California, August 26-30, 1983.

The research reported here is based on the project, "Validation Criteria for Job Adjustment of Disadvantaged Youth," supported in part by Grant No. NIE-G-78-0002 from the National Institute of Education. The author wishes to thank Dr. James McPartland, Co-Director, Center for Social Science Research Studies, Johns Hopkins University, and his staff for providing computer services for the study.

ED 233 208

The majority of people demanding manpower services in the Baltimore, Maryland area are under 25 years of age. Many are ill-equipped to compete for an already limited number of jobs. Most of these disadvantaged individuals are school dropouts and chronic truants. When these groups are added to high school graduates seeking employment, the seriousness of the problem is evident - approximately 17,000 Baltimore youths seeking work each year.

To alleviate the problem of transition from school to world of work, Mayor's Office of Manpower Resources in Baltimore created the Harbor City Learning (HCL) program, an alternative educational program model for both in-school and out-of-school youths. The HCL program combined the Comprehensive Employment and Training Act (CETA) Title 1 monies with resources from the Baltimore City Public Schools, and provided a comprehensive educational system on a year-round basis: part-time work experience and training in the public sector for those in traditional in-school programs; an alternative curriculum mixed with paid job experiences for school dropouts who were enrolled in the HCL center.

The research project attempted to examine how educational experiences and programs sponsored by CETA could better prepare the inner-city youth to perform successfully in a number of jobs or occupations. Movement from training to job was the central concern of the study. The HCL program was particularly selected for this field research, because it offered experience-based career education and its student body consisted of disadvantaged youth. Since 17 year old black males represent the largest age-sex-race population group in Baltimore

City, it should be indisputable that this group should receive the primary focus of career preparation (Mayor's Office of Manpower Resources, 1976).

Furthermore, research studies conducted on vocational choice with disadvantaged clients are rather few. In their comprehensive review of literature, Salomone and Shrey (1973) cited only one study by Banducci (1970). He found that the occupational stereotypes of students from low socio-economic status were less accurate than those of students in higher social classes. The present study was designed to contribute to additional knowledge relating to the black disadvantaged group.

The study basically dealt with the noncognitive output of job adjustment. Specifically, its purpose was threefold: (1) to determine the characteristics of the students who became involved in the regular in-school programs, and in the alternative program in the HCL center; (2) to examine the differential program impact on the study groups; (3) to present empirical evidence, if any, supporting the implications of major theories of career development, especially Maslow's (1954) theory of "needs hierarchies" and Holland's (1973) typology of persons and occupations, on the low-achieving, inner-city youth.

Method

Subjects

The subjects consisted of two study groups: In-School Group (n = 91), and Alternative Group (n = 49). For the In-School Group, the subjects were drawn from the regular in-school program graduates of 1977 and 1978 who were continuously employed for six months or more. In the Alternative Group, the subjects were composed of the

alternative HCL program graduates of 1977 and 1978 who had completed at least six months on the job. All the subjects in both the study groups pertained to the black community, and their age ranged from 18 to 23 years. This concurrent validation study was designed to develop profiles which would identify the abilities, attributes and characteristics of job success of the inner-city youth in the regular school program as also of the school dropout and the delinquent youth in the alternative program at the HCL center.

Experimental Variables

In order to obtain predictive measures on abilities, aptitudes and interests, five sets of inputs including demographic characteristics were used in the study. These are briefly described below:

I. Demographic Characteristics

1. Sex: Male = 1; Female = 0

2. Tract Classification (based on family earning) (Baltimore City Regional Planning Council, 1978)

Level of Earning	Coded Value (Based on Mid-Point of Interval)
Less than $ 7,000	3.5
$ 7,000 - 9,999	8.5
$10,000 - 14,999	12.5
$15,000 - 24,999	20.9
$25,000 plus	30.0

Note. The decimal point was removed in statistical analysis.

II. Aptitude Measures

3. GATB - G (Intelligence, closely related to doing well in school)

4. GATB - V (Verbal Aptitude)

5. GATB - N (Numerical Aptitude)

Nine aptitude measures are obtained from the General Aptitude Test Battery. Only the three major aptitude measures cited above were used in the study.

III. School Performance

6. GPA (Last 2 yrs.)

For the in-school program students, the Grade Point Average was obtained for Grades 11 and 12. For the Alternative program students, the Grade Point Average was worked out for the last two years in the regular school prior to their enrollment at the HCL center. In the regular school, the passing score in each subject is 60 out of a maximum of 100. The numerical value of the GPA was computed from the actual score obtained by the student in each subject during the last two years. The decimal point was removed from the numerical average in statistical analysis.

7. Junior High Attendance

Good (absent for 0 - 10 days) = 1
Fair (absent for 11 - 19 days) = 2
Poor (absent for 20 days or more = 3

Note. In Jr. High Attendance, lower scores indicate better school attendance.

IV. Curriculum (Last Regular School)

8. Vocational: Voc. Curr. = 1; Other = 0

9. General : Gen. Curr. = 1; Other = 0

The curricula of the regular schools to which the study subjects originally belonged were categorized into three groups, namely, Vocational, General, and Academic, based on the program emphases. For qualitative classifications of Curriculum, dummy variable coding (Cohen & Cohen, 1975) was used in which 1, 0 dichotomies were applied to each of the Vocational and General Academic Curricula as noted above. The third group, Academic Curriculum, served as a reference group, that is, without any explicit representation as an independent variable.

V. Holland Typology

10. GED Level

General Educational Development (GED) Level (Holland, 1973), an estimate of the educational level required to perform a job, was obtained from the Dictionary of Occupational Titles (United States Department of Labor, 1965). GED is reported on a scale from 1 to 6.

Levels 1 - 2: Elementary school, or no special training;
Levels 3 - 4: High school and some college, technical or business training;
Levels 5 - 6: College training

John L. Holland's occupational codes and GED Level for the 1970 census detailed occupational titles, used in the study, were obtained from Gottfredson & Brown (1978).

11. Vocational Preference - Job Congruence

The Vocational Preference Inventory (VPI) (Holland, 1973) is a device for assessment of a person's resemblance to each of the six occupational types, that include all of the most common occupations in the United States. The personality types and the occupational classification use the same concepts in a single theoretical system. Thus the six main VPI scales representing the six groups of occupations are: Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C). The summary code in the models ranked in order of importance. For purposes of this study, the agreement between a subject's VPI summary code and the code of his current occupation was computed with a dummy variable as described below:

First letter of VPI code matched first letter of occupational code = 1; else = 0.

12. MSQ General

The Minnesota Satisfaction Questionnaire (MSQ), a 20-scale Likert format questionnaire, was developed by the Work Adjustment Project, University of Minnesota (Weiss, D. J., & others, 1967). It is designed to measure overall job satisfaction and satisfaction with various aspects of the individual's work environment. Scoring of the MSQ can include a General Satisfaction scale. This scale uses 20 items (one from each of the twenty scales), yielding a score ranging from 20 to 100. In this study, the General Satisfaction score was used as the criterion measure for job adjustment.

Procedure

After some of the administrative bottlenecks had been streamlined, the project operation actually started in July 1978. Lists of 1977 and 1978 graduates from the in-school program as also from the HCL center were obtained from Mayor's Office. These documents were used for selection of subjects for the two study groups. The project staff time and effort were mostly expended on establishing the initial telephone contact with the subjects, and on contacting the same individuals a number of times to persuade them to appear for the testing sessions. Individual letters were addressed to the prospective subjects, and press release and radio announcements were also made for the purpose. In all these communications, the intent

of the project was explained and the mode of reimbursement of pocket expenses for participating subjects was also mentioned. In spite of the monetary incentive, the subjects were generally shy of taking tests.

The tests were administered in small groups in the morning and afternoon sessions. A graduate from the Master's program in Rehabilitation Counseling at Coppin State College, employed as a Research Associate in the project and especially trained in the GATB, administered the test battery to all the subjects. An official from the Planning, Research and Evaluation Center of Baltimore City Public Schools, who had just retired from service, was recruited as a Research Associate to supervise the testing sessions and to administer the other tests, namely, the VPI and the MSQ. Student assistants with orientation in tests and measurement also helped in the test administration. A second official from the Planning, Research, and Evaluation Center of Baltimore School System was engaged on a part-time basis to serve as a liaison between the project and the public schools. She spearheaded the efforts in collating the school-related data for the project subjects.

Analysis of Data

The eleven predictor variables were arranged into five hierarchical sets, as described earlier.

The two study groups were compared by means of t tests. Zero-order correlations were computed between all variables, separately for the In-School Group and the Alternative Group. The purpose was to find the degree and direction of relationship of each of the predictor variables with the criterion, and to determine the "problem of multicollinearity" (that is, the existence of substantial correlation), if any, between the predictor variables.

Separate stepwise regression analyses were carried out for the two groups, and each MSQ measure. This experimental approach was designed to provide the maximum R^2 with a minimum number of predictor variables. Stepwise regressions were followed by the hierarchical analyses of predictor sets, the ordering of such sets being made on an a priori basis. This variance partitioning strategy reported the R^2 for the MSQ measure regressed on to the first set of variables, and then it reported additions to R^2 that resulted from adding each of the remaining sets in order with previous sets of variables still in the equations. Within each set, the variance uniquely explained by each predictor variable was calculated, controlling for all previous sets and all other variable(s) in the particular set.

Results

Comparison of Study Groups

The descriptive statistics for the experimental variables in respect of the two groups, with the t values and the levels of significance for comparison of means are presented in Table 1. The results indicated that six predictor variables, namely Sex, Tract Classification (a proxy variable for socioeconomic status), GPA (Last 2 yrs.), Jr. High Attendance, and Curriculum - both General and Vocational, and the criterion measure of MSQ Gen. discriminated the two groups at statistically significant levels. The In-School Group had better mean scores in Tract Classification, GPA (Last 2 yrs.), Jr. High Attendance, and MSQ Gen. The lower mean value of Jr. High Attendance actually indicated superior performance. The In-School Group had a higher proportion of male subjects, whereas in the Alternative Group the reverse was the case. This disparity in the composition of the two groups contributed to the higher mean score for Sex in the In-School Group. The same reasoning applies to

Curriculum. A higher proportion of the subjects in the In-School Group had pursued the Vocational Curriculum, which accounted for their greater mean score in the area. In the Alternative Group a disproportionately high number of subjects had been enrolled in the General Curriculum while in the regular school, and this contributed to the higher mean value for this group in the General Curriculum area.

Insert Table 1 about here

The above profiles of characteristics of the study groups suggest the following major conclusions, to wit:

1) The mean values of the Aptitude Measures for the subjects in the study groups are rather low (For the GATB norms, X = 100 and SD = 20). A student's profile with low G, V, N may indicate some school learning difficulties, among them the possibility of some reading problems (Christiansen, 1981).

2) The HCL center is serving a useful purpose, inasmuch as its vocationally oriented training program has helped the participants in the Alternative Group acquire the Aptitude Measures to the level of their compeers (In-School Group) from the regular school. This achievement is particularly noteworthy, as the trainees at the HCL center came from inferior home environment and had poorer school background.

3) The subjects at the HCL center (Alternative Group) were mostly students in the General Academic Curriculum while in the regular school. These students should have been placed in the Vocational Curriculum, which could have reduced the delinquency and the drop-out rates. As a matter of fact, the shift of emphasis to vocational training at the HCL center provided employment opportunities to this student body. Better guidance and counseling services in academic programming at the junior and senior levels are imperative for students having learning and behavior problems.

4) HCL center's outreach program seems to be quite effective. The center has graduated students (Alternative Group), whose earlier school records were very poor.

5) However, in regard to job adjustment, the results are discouraging for both the groups from the regular school and from the HCL center. This is more so for the HCL graduates who lagged behind their confreres from the regular school. The mean values of the MSQ Gen. measures for the In-School Group and the Alternative Group correspond to the percentile ranks of 28 and 14 respectively (For the MSQ norm of employed non-disabled persons, X = 77.86 and SD = 9.91) (Weiss, 1967). It is obvious that the training program at the HCL center especially needs restructuring and redirection, if it is to succeed in its mission of career education and work orientation for the disadvantaged urban youth.

Intercorrelations of
Experimental Variables

The correlation matrices for the experimental variables were computed separately for the In-School Group and the Alternative Group. Intercorrelations which were found statistically significant in the In-School Group are discussed below:

1) Sex, which had a higher proportion of males, was associated with lower GPA (Last 2 yrs.) ($p < .05$), signifying thereby that the school performance of the male subjects was far from satisfactory.

2) Lower Tract Classification was related to Vocational Curriculum ($p < .05$), as also to higher MSQ Gen. ($p < .05$). This indicated that the subjects coming from relatively poor home environment generally opted for vocationally oriented courses, and they were better adjusted to their present jobs.

3) High intercorrelations of GATB-G, V, N ($p < .01$) were due to the fact that the Aptitudes V and N are measured by tests that are also used to measure Aptitude G (United States Department of Labor, 1967, p. 30).

4) GATB-N was associated with GPA (Last 2 yrs.) ($p < .05$), as also with Jr. High Attendance ($p < .05$). In other words, students having relatively better school records obtained higher scores in Aptitude - N.

5) GPA (Last 2 yrs.) was also related to Jr. High Attendance ($P < .01$). These two school performance variables were inter-related.

6) Lower Jr. High Attendance was associated with General Curriculum ($p < .01$). It appears that students, placed in the General Academic Curriculum, missed classes more often because of their repugnance to the academic program.

7) GED Level was associated with Voc. Pref.-Job Congruence ($p < .01$); it also approached significance with MSQ Gen. ($p = .10$). Most of the subjects, who had attained the levels of general educational development demanded by their occupations, could be classified as having current job-aspiration congruence leading to stability of jobs. These people seem to be better adjusted to their job status.

8) Vocational Curriculum was inversely associated with General Curriculum, as expected ($p < .01$).

It would thus be observed that the zero-order correlation coefficients identified only two predictors, Tract Classification and GED Level, associated with MSQ Gen., the first one at a significantcant level ($p < .05$) and the second one approaching significance ($p = .10$).

However, a different picture emerged from the intercorrelations of the experimental variables for the Alternative Group. These findings are analyzed below:

1) Tract Classification was associated with GPA (Last 2 yrs.) ($p < .05$). That is, students having relatively comfortable living conditions performed better in school.

2) As in the In-School Group, GATB-G, V, N were highly intercorrelated ($p < .01$). Aptitudes G and V approached significance with lower MSQ Gen. ($p < .10$). This implied that the subjects having relatively higher abilities and aptitudes in these areas were rather dissatisfied with their current job status.

3) The relationship between Vocational Curriculum and General Curriculum was no different from that obtained in the In-School Group; the variables were inversely related ($p < .01$). Vocational Curriculum was also inversely associated with Voc. Pref. - Job Congruence ($p < .05$). It appears that most of the subjects, who had pursued the Vocational Curriculum while in the regular school, were disillusioned with their present jobs. Such incongruity between jobs and aspirations, indicative of unstability, may be due to occupational constraints and/or unrealistic aspirations.

In the case of the Alternative Group, none of the predictor variables was significantly related to MSQ Gen. As mentioned above, only Aptitudes G and V, showing negative relationship with MSQ Gen., approached significance.

Stepwise Regression Analysis

Although the zero-order correlations of the predictor variables with MSQ Gen. were mostly nonsignificant, a stepwise regression analysis was performed separately for the In-School Group and the Alternative Group primarily to select from each group of predictor variables the one variable at each stage which made the largest contribution to R^2. Known as the coefficient of determination, R^2 estimates the proportion of variance in the criterion associated with or "explained by" all the predictors in the regression equation (Bridge, Judd, & Moock, 1979, p. 145). The results of the stepwise regression analyses are presented in Tables 2 and 3.

Insert Tables 2 and 3 about here

In the In-School Group all the eleven predictors, admitted into the equation, produced an overall R^2 of .164. But only the first two variables, Tract Classification and GED Level, accounted for an R^2 of .088 which was statistically significant. As noted earlier, the same two variables figured in the zero-order correlation with MSQ Gen.

As operationally defined, the unique variance explained by a predictor is the increment in R^2 when this predictor variable is added to the other predictor variables in the multiple regression analysis (Bridge, Judd, & Moock, 1979, p. 147). Thus, with two predictors - Tract Classification and GED Level, the unique variance in MSQ Gen.

in the In-School Group worked out to .052 and .035 respectively. The variance in MSQ Gen. explained jointly by these two variables was trivial (.088 - .052 - .035, or .001).

With the above two predictor variables, a (raw score) regression equation was developed for estimating MSQ Gen.:

$$\hat{Y} = -.785\ X_2 + 2.873\ X_8 + 70.504,$$

where $\hat{Y}$ = an estimated value of the criterion variable MSQ Gen., X_2 = Tract Classification, and X_8 = GED Level.

In the Alternative Group ten predictor variables entered into the regression analysis to produce an overall R^2 of .260. Only one variable, GPA (last 2 yrs.), was not included in the equation because of insufficient F level. GATB-V, which approached significance in the zero-order correlation with MSQ Gen., was the first variable to enter the equation; but it could not produce a significant R^2. The other variable, GATB-G, which also approached significance in its relationship with the criterion, was much lower in the steps. This was primarily due to the "problem of multicollinearity," among the set of Aptitudes G, V, N. It is to be noted in this context that the overall R^2 of .260 might be rather inflated, because of the small number of cases (N = 40) relative to the number of predictor variables.

As no cross-validation test could be conducted for the stepwise analysis of the In-School Group, and as no statistically significant R^2 could be obtained from such analysis of the Alternative Group, substantive interpretations of the stepwise results are particularly difficult. As originally planned, this technological approach was supplemented by an explanatory analysis based on "causal priority."

Hierarchical Analysis

In the hierarchical model, sets of predictor variables were entered into the regression equation in a specified order with regard to their temporally or logically determined causal priority. The criterion's total variance (R^2) could thus be analyzed in terms of the proportion of such variance uniquely explained by each set of predictors. This is the only basis on which variance partitioning can proceed with correlated predictor variables (Cohen & Cohen, 1975; p. 98). Five sets of predictors as hierarchically ordered are already detailed in Table 1. The results of the hierarchical analyses for the In-School Group and the Alternative Group are depicted in Tables 4 and 5.

Insert Tables 4 and 5 about here

In the In-School Group, the demographic set (Sex & Tract Classification) accounted for 6.8% of the criterion's variance. An additional 2.1% of the variance was contributed by Aptitude Measures (GATB-G, V, N). School Performance set (GPA - Last 2 yrs. & Jr. High Attendance), and Curriculum (Vocational & General) respectively added 0.3% and 1.2% of the criterion's variance. Finally, Holland Typology (GED Level & Voc. Pref. - Job Congruence) produced an additional 6.0% of the total variance in the criterion variable. Although the F - values were not statistically significant at any of the steps, the hierarchical analysis did provide some indications as to the contributions of the research factors to the overall job adjustment of the subjects in the In-School Group. Whereas the total R^2 worked out to .164, the highest contributions to the criterion's variance were made by the Demographic Characteristics (6.8%) and Holland Typology (6.0%).

Aptitude Measures accounted for a moderate contribution of 2.1% to the variance. The impact of School Performance and Curriculum was minimal, accounting for only 1.5% of the variance in the criterion.

In the Alternative Group, the five sets of predictors produced an overall R^2 of .260. In this case the demographics accounted for 2.2% of the criterion's variance, Aptitude Measures 13.7%, School Performance 0.4%, Curriculum 3.9%, and Holland Typology 5.8%. Here also the F - values were non-significant. In the Alternative Group, Aptitude Measures accounted for a substantial proportion (13.7%) of the criterion's variance, followed by Holland Typology (5.8%). Unlike Curriculum for the In-School Group, Curriculum for the Alternative Group produced a moderate amount of variance (3.9%) in the criterion. Demographic characteristics accounted for only 2.2% of the variance, much less than that produced by the corresponding set in the In-School Group. As expected, School Performance which included GPA (Last 2 yrs.) and Jr. High Attendance in the regular school system prior to their enrollment in the HCL Center had practically no effect on the job adjustment of the Alternative Group.

Discussion

According to Holland's theoretical formulations, deficiencies in vocational development occur in a number of ways. The crux of the problem lies in a person's insufficient or conflicting experience about his interests, competencies and personal characteristics, and/or about the major occupational environments (Holland, 1973). The young, disadvantaged youth need occupational information, training and placement help to remediate these shortcomings. The regular in-school program, even with the work-study component, is not directly geared to the said objective. The HCL center, with its

experience-based career education program, has not also met with much success to serve as an implement agent for transition to the work world of the participating students - the high risk youth. The mean values of Voc. Pref. - Job Congruence in Holland Typology and of the criterion measure MSQ Gen. are very low for both the In-School Group and the Alternative Group - lower still for the latter group. Both, pointing to the same direction, indicate that the subjects in the two groups are not quite well adjusted to their current job status.

It is, however, interesting to note that the mean values of GED Level in Holland Typology suggest that the subjects in both groups more or less acquired the level of education required to perform their present jobs. As a matter of fact, the unique variance in MSQ Gen. associated with GED Level for the In-School Group was statistically significant (see Table 2). The results of variance partitioning in the analysis of MSQ Gen. point out that Holland Typology made substantial contributions to R^2 for both the In-School Group and the Alternative Group. The effect of GED Level is, however, depressed in both the Groups, because of the low level of Voc. Pref. - Job Congruence. In other words, in the scramble for jobs, the subjects had to accept positions for which they were qualified but which may not quite correspond to their personality pattern. According to Crites (1982), this is probably the most "rudimentary criterion of career adjustment." Job-aspiration congruence may be adversely affected by the distribution of jobs in the economy (Gottfredson, Holland, & Gottfredson, 1975), or labor market discrimination, or lack of realism on the part of job seekers. Most of the subjects in the study groups are, however, likely to change their aspirations over time to match the job category, as progression in this direction is the common mode

of achieving congruence (Gottfredson & Becker, 1981). In fairness to the work-study program of regular schools and the career development program of the HCL center, it must be said that their training efforts have little control on some of the extraneous factors mentioned above.

The study subjects' ability to hold jobs on a long range basis, inspite of job-aspiration incongruence, can be better explained in light of Maslow's theory of basic needs. In the Maslovian sense, "the basic human needs are organized into a hierarchy of relative potency" (Maslow, 1954). Lower-order needs, such as the physiological and safety needs are to be met, before higher-order needs can emerge. For the disadvantaged youth, job tenure provides the wherewithal to meet these basic survival needs. Most of the trait-factor theorists have tended to ignore the needs component from their trait-oriented approach to career choice. However, in the trait-oriented research study conducted by the Work Adjustment Project at the University of Minnesota, needs (regarded as traits) together with environmental demands are used for prediction of job satisfaction, job effectiveness, and job tenure (Osipow, 1973; p. 211). The criterion measure, MSQ Gen., used in this study includes the ingredient of needs. An inference may possibly be drawn in support of the needs theory from an analysis of the data on Tract Classification (an index of socioeconomic status) and MSQ Gen. (an indicator of need satisfaction). Although the mean values of Tract Classification and MSQ Gen. are very low for subjects from both the in-school program and the alternative program at the HCL center, these values for the former group are significantly higher than that of their colleagues in the latter group. In other words, the subjects from relatively better home

conditions experience more job satisfaction because of lesser needs; whereas, the position is reversed in the case of persons from more deprived homes. Voc. Pref. - Job Congruence in Holland Typology, which does not take into account the needs aspect, could not discriminate the two groups. Holland's theory seems to have limited application to the disadvantaged, marginally educated youth whose scope of occupational training and choice is rather restricted.

References

Baltimore City Regional Planning Council. 1970-76 residential population data, Report #4, September 1978.

Bridge, R. G., Judd, C. M., & Moock, P. R. The determinants of educational outcomes: The impact of families, peers, teachers, and schools. Cambridge, Mass.: Ballinger Publishing Co., 1979.

Christiansen, H. D. Testing in counseling: Uses and misuses. Tucson, Arizona: Peter Juul Press, 1981.

Cohen, J., & Cohen, P. Applied multiple regression/correlation analysis for the behavioral sciences. New York: John Wiley & Sons, 1975.

Crites, J. Measurements of career development. In B. Bolton & R. Roessler (Eds.), Proceedings of the symposium on applied research methodology. Fayetteville: Arkansas Rehabilitation Research & Training Center, 1982.

Gottfredson, L. S., & Becker, H. J. A challenge to vocational psychology: How important are aspirations in determining male career development? Journal of Vocational Behavior, 1981, 18, 121-137.

Gottfredson, L. S., & Brown, V. C. Holland codes for the 1960 and 1970 censuses: Detailed occupational titles. JSAS Catalog of Selected Documents in Psychology, 1978, 8, 22. MS No. 1660)

Gottfredson, G. D., Holland, J. L., & Gottfredson, L. S. The relation of vocational aspirations and assessments to employment reality. Journal of Vocational Behavior, 1975, 7, 135-148.

Holland, J. L. Making vocational choices: A theory of careers. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.

Maslow, A. H. Motivation and personality. New York: Harper & Row, 1954.

Osipow, S. H. Theories of career development, 2d ed. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.

United States Department of Labor. Dictionary of occupational titles. Washington, D.C.: U.S. Government Printing Office, 1965.

United States Department of Labor. Manual for the General Aptitude Test Battery, Section III: Development. Washington, D.C.: U.S. Government Printing Office, 1967.

Weiss, D. J., & others. Manual for the Minnesota satisfaction questionnaire. Minneapolis, Minnesota: Work Adjustment Project, Industrial Relations Center, University of Minnesota, 1967.

TABLE 1

Characteristics of Subjects in Two Study Groups
Based on Experimental Variables

Variables	In-School Group			Alternative Group			Significance Level	
	X	SD	n	X	SD	n	t value	p
I. Demographic Characteristics								
1. Sex	.62	.49	90	.44	.50	48	2.099	.038
2. Tract Classification	99.16	34.22	89	84.58	30.66	48	2.464	.015
II Aptitude Measures								
3. GATB - G	80.47	14.45	90	81.02	9.60	46	.235	.815
4. GATB - V	85.27	11.03	91	83.17	12.32	46	1.012	.313
5. GATB - N	79.51	15.62	90	80.60	13.61	45	.398	.691
III. School Performance								
6. GPA (Last 2 yrs.)	740.40	93.95	89	539.43	140.32	46	7.238	.0001
7. Jr. High Attendance	1.79	.84	86	2.67	.60	45	6.194	.0001
IV. Curriculum (Reg. Sch.)								
8. Vocational	.54	.50	85	.20	.41	49	4.005	.0001
9. General	.35	.48	85	.76	.43	49	4.828	.0001
V. Holland Typology								
10. GED Level	3.09	.83	86	3.22	.73	46	.852	.396
11. Voc. Pref. - Job Congruence	.42	.50	85	.37	.49	46	.59	.552
VI. Criterion								
12. MSQ Gen.	72.08	11.75	89	67.19	15.37	48	2.081	.039

TABLE 2

Stepwise Regression Analysis for Job Adjustment:
In-School Group (N = 75)

Predictors	R^2	SE_e	Unstandardized Regression Coeff.	Standardized Regression Coeff. (Beta)	F
2. Tract Classification	.053	11.925	- .785	- .230	4.086* (1/73 df)
8. GED Level	.088	11.784	2.873	.187	3.469* (2/72 df)
5. GATB-N	.103	11.769	.111	.125	2.713 (3/71 df)
11. Voc. Pref. - Job Congruence	.117	11.757	3.304	.135	2.327 (4/70 df)
3. GATB-G	.142	11.678	- .233	- .269	2.276 (5/69 df)
1. Sex	.149	11.711	- 2.353	- .096	1.987 (6/68 df)
9. Curriculum-Vocational	.154	11.764	1.798	.074	1.744 (7/67 df)
10. Curriculum-General	.161	11.806	3.853	.149	1.581 (8/66 df)
4. GATB-V	.162	11.885	- .674	- .061	1.401 (9/65 df)
7. Jr. High Attendance	.163	11.972	- .419	- .030	1.248 (10/64 df)
6. GPA (Last 2 yrs.)	.164	12.064	- .273	- .022	1.119 (11/63 df)

* $p < .05$

TABLE 3

Stepwise Regression Analysis for Job Adjustment:
Alternative Group (N = 40)

Predictors	R^2	SE_e	Unstandardized Regression Coeff.	Standardized Regression Coeff. (Beta)	F
4. GATB-V	.079	13.708	− .259	− .281	3.264 (1/38 df)
8. GED Level	.125	13.541	4.101	.216	2.644 (2/37 df)
10. Curriculum-General	.141	13.604	− 4.432	− .127	1.966 (3/36 df)
5. GATB-N	.155	13.682	.138	.185	1.606 (4/35 df)
3. GATB-G	.222	13.322	− .591	− .677	1.938 (5/34 df)
1. Sex	.239	13.372	4.198	.150	1.727 (6/33 df)
11. Voc. Pref. - Job Congruence	.253	13.456	3.596	.125	1.546 (7/32 df)
9. Curriculum-Vocational	.258	13.628	5.737	.147	1.344 (8/31 df)
7. Jr. High Attendance	.259	13.837	1.048	.046	1.167 (9/30 df)
2. Tract Classification	.260	14.067	− .140	- .030	1.019 (10/29 df)

Note. None of the F values is statistically significant

TABLE 4

Job Adjustment Regressed on Hierarchically Ordered Sets of Predictor Variables

In-School Group (N = 75)

Sets of Predictor Variables	R^2	SE_e	F
I. Demographic Characteristics	.068	11,915	2.607 (2/72 df)
II. Aptitude Tests	.089	12.030	1.351 (5/69 df)
III. School Performance	.092	12.186	.974 (7/67 df)
IV. Curriculum	.104	12.290	.842 (9/65) df)
V. Holland Typology	.164	12.065	1.120 (11/63 df)

TABLE 5

Job Adjustment Regressed on Hierarchically Ordered Sets of Predictor Variables

Alternative Group (N = 40)

Sets of Predictors	R^2	SE_e	F
I. Demographic Characteristics	.022	14.316	.419 (2/37 df)
II. Aptitude Tests	.159	13.846	1.290 (5/34 df)
III. School Performance	.163	14.238	.893 (7/32 df)
IV. Curriculum	.202	14.365	.842 (9/30 df)
V. Holland Typology	.260	14.316	.894 (11/28 df)